A Multicultural Approach to Experiential Outreach in Astrobiology

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Scientists with the Indiana-Princeton-Tennessee Astrobiology Initiative (IPTAI) conducted education and public outreach (E/PO) to undergraduates, high school teachers, and middle-school students as part of their investigation of extreme environments in 2004.

Through a National Science Foundation funded Research Experience for Undergraduates (REU) program, students from different academic disciplines were selected in a nationwide search to participate in laboratory and field experimentation at South Africa (SA) gold mines during a 7-week summer program. US and SA mentors jointly worked with students to interpret data from the perspectives of the various disciplines, and to gain an understanding of how this research could fit into the bigger picture of life's origins and potential for life on other planets. Pre- and post-exit surveys were administered to the students to assess the impact of this form of experiential education on the students' approach to science learning, increase in science knowledge, and future plans for science careers.

Other venues for astrobiology E/PO to other age groups included a public demonstration of the Carnegie Institution's astrobiology interactive kiosk on the deep-sea vents at the Southern Appalachian Science and Engineering Fair. IPTAI also funded three regional high school science teachers from Tennessee and Virginia to attend the Astrobiology Laboratory Institute for Instructors (ALI'I) at the University of Hawaii, Manoa. IPTAI scientists teamed with these teachers to include a special astrobiology component at SHaring ADventures in Engineering and Science (SHADES), a one-day workshop designed to attract middle-school aged girls to careers in math and science.